

# **METHOD AND APPARATUS FOR DYNAMICALLY ALLOCATING UPSTREAM BANDWIDTH IN PASSIVE OPTICAL NETWORKS**

## **ABSTRACT**

One embodiment of the present invention provides a system that facilitates dynamic allocation of upstream bandwidth in a passive optical network which includes a central node and at least one remote node. Each remote node is coupled to at least one logical entity, which corresponds to a device or a user, that transmits upstream data to the central node and receives downstream data from the central node. The central node is coupled to an external network outside of the passive optical network through a shared out-going uplink.